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DATE MAILED:

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

☒ Responsive to communication(s) filed on *Jan 8, 2001* _____ .

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire ____3____ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

    ☒ Claim(s) *1-13 and 15-20* _____ is/are pending in the application.

    Of the above, claim(s) _____ is/are withdrawn from consideration.

    ☒ Claim(s) *1* _____ is/are allowed.

    ☒ Claim(s) *2-13 and 15-20* _____ is/are rejected.

    ☐ Claim(s) _____ is/are objected to.

    ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

    ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

    ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

    ☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

    ☐ The specification is objected to by the Examiner.

    ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

    ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

        ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

        ☐ received.

        ☐ received in Application No. (Series Code/Serial Number) _____ .

        ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    *Certified copies not received: _____ .

    ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

    ☐ Notice of References Cited, PTO-892

    ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

    ☐ Interview Summary, PTO-413

    ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

    ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2.   Claim 18 is rejected under 35 U.S.C. 102(e) as being anticipated by Nonoshita et al of

record (5,905,821).

        Nonoshita et al discloses a compression/expansion circuit as shown in Figures 1-4, and the

same apparatus as claimed in claim 18, comprising the same encoder (see columns 3-6 and Figure

22) for producing encoded real-time information; compression circuitry (i.e., 8 of Figure 2 and see

Figure 21, columns 1 and 3-6) coupled to the encoder for producing compressed data based upon

a previously stored transmit reference (i.e., from 2 of Figure 2) and the encoded real-time

information; a plurality of output buffers (see 52 of Figure 1, and 70-73 of Figure 4) coupled to

the compression circuitry for storing the compressed data; and a network interface (i.e., 7 of

Figure 2) coupled to the plurality of output buffers, the network interface transmitting

compressed data from a selected output buffer of the plurality of output buffers, the compressed

data from the selected output buffer when used in conjunction with the previously stored transmit

reference approximating a next frame expected by a receiving apparatus (see 57 of Figure 1 and

columns 5-6).

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 2-8, 11, 15, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Nonoshita et al as applied to claim 18 in the above paragraph (2), and further in view of

Barberis et al of record (4,320,500).

Nonoshita et al discloses substantially the same apparatus as above, further including a

transmit reference buffer (i.e., 2 of Figure 2) for storing a current transmit reference; compression

circuitry coupled to the encoder (see 8 of Figure 2 and columns 3-6) and to the transmit reference

buffer (i.e., 2 of Figure 2) for producing compressed data based upon the current transmit

reference and the encoded real-time information; wherein the compressed data comprises a

differential between the encoded real-time information and the current transmit reference (see

column 1, columns 5-6); storing differential data in one of a plurality of output buffers (see 52 of

Figure 1, 70-73 of Figure 4, and columns 1 and 3-6); and transmitting differential data from the

current transmit buffer over the network (see 7 of Figure 2 and columns 3-6).

Nonoshita et al does not particularly disclose, though, the selected output buffer

containing compressed data which accommodates one or more characteristics of the network

better than compressed data in at least one other buffer of the plurality of output buffers; the

selected output buffer contains compressed data which accommodates one or more characteristics

of the network better than compressed data in all other buffers of the plurality of output buffers;

the contents of a selected output buffer of the plurality of output buffers to be transmitted onto a

data communications channel of a network based upon one or more characteristics of the data

communications channel; the network interface determining the selected output buffer and

transmitting data over the network from the selected output buffer; the selected output buffer

contains compressed data which, when used in conjunction with the current transmit reference

and the current transmit reference, accommodates the one or more characteristics of the data

communications channel better than compressed data from at least another buffer of the plurality

of output buffers; wherein the one or more characteristics of the data communications channel

include transmission delay on the data communications channel; selecting a selected output buffer

with reference to one or more predetermined coding strategies, whether compressed data from

the selected output buffer is appropriate for transmission to a receiving node; and determining

whether the differential data in a particular output buffer accommodates one or more

characteristics of the network better than differential data in at least one other output buffer of the

plurality of buffers as claimed in claims 2-7, 11, 15, 19, and 20. The particular selection of an

output buffer based on characteristics of a network to provided a selected output buffer which

accommodates one or more characteristics including transmission delays of the network better

than at least one other or all other buffers to be transmitted onto a data communications channel

of a network, in general, is old and well recognized in the art, as exemplified by Barberis et al (see

column 4, lines 20-63). Therefore, it would have been obvious to one of ordinary skill in the art,

having the Nonoshita et al and Barberis et al references in front of him/her and the general

knowledge of selected buffer output devices for network channel accommodations, would have

had no difficulty in providing the particular selection of an output buffer based on characteristics

of a network to provide a selected output buffer which accommodates one or more characteristics

including transmission delays of the network better than at least one other or all other buffers to

be transmitted onto a data communications channel of a network as taught by Barberis et al for

the network interface and buffer control as shown in Figures 1 and 2 of Nonoshita et al for the

same well known output buffer control for network interface operations purposes as claimed.

5.   Claims 12, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

combination of Nonoshita et al and Barberis et al as applied to claims 2-8, 11, 15, 18-20 in the

above paragraphs (2) and (4), and further in view of Jeong of record (5,497,153).

The combination of Nonoshita et al and Barberis et al disclose substantially the same

apparatus as above, but does not particularly disclose the encoded real-time information includes

video and audio information, and wherein the one or more predetermined coding strategies

include minimizing artifacts as claimed in claims 12, 13, and 16. However, Jeong discloses a

system for variable length coding and variable length decoding digital data for compression

transmission data as shown in Figure 5, and teaches the conventional video and audio real time

encodings (see column 1, lines 20-25), as well as coding strategies minimizing artifacts before

transmission (i.e., as provided by 52, 54 of Figure 5, and see column 5, line 16 to column 6, line

36). Therefore, it would have been obvious to one of ordinary skill in the art, having the

Nonoshita et al, Barberis et al, and Jeong references in front of him/her and the general

knowledge of video/audio encoders with coding strategies, would have had no difficulty in

providing the video and audio encoder with artifact minimization effects as shown in Figure 5 of

Jeong for the compression circuit 8 of Figure 2 of Nonoshita et al for the same well known

purposes as claimed.

6.   Claims 9, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the

combination of Nonoshita et al and Barberis et al as applied to claims 2-8, 11, 15, 18-20 in the

above paragraphs (2) and (4), and further in view of Khalil of record (5,343,465).

The combination of Nonoshita et al and Barberis et al disclose substantially the same

apparatus as above, but does not particularly disclose wherein the one or more characteristics of

the data communications channel include bandwidth availability and burstiness of traffic on the

data communications channel, and allocating available bandwidth to achieve a higher frame rate as

claimed in claims 9, 10, and 17. However, Khalil discloses a method and system for real time

burstiness analysis of network traffic as shown in Figure 1 and 8, and teaches the conventional

measuring and analysis of the burstiness of network traffic and allocation of available bandwidth

to support specific services (see column 2, lines 27-66). Therefore, it would have been obvious to

one of ordinary skill in the art, having the Nonoshita et al, Barberis et al, and Khalil references in

front of him/her and the general knowledge of network traffic conditions with bandwidth

allocations, would have had no difficulty in providing the burstiness analysis of network traffic

with coding strategies including the allocation of available bandwidth for the system as shown in

Figure 2 of Nonoshita for the same well known purposes as claimed.

7.   Claim 1 is allowed.

8.   Regarding the applicant's arguments at pages 9-10 of the amendment filed January 8,

2001 concerning in general that "... Nonoshita, at the least, does not disclose: compression

circuitry coupled to the encoder for producing compressed data based upon a previously stored

transmit reference and the encoded real-time information, as required by claim 18 ... These

portions of Nonoshita further show that Nonoshita uses difference resolutions of the same image

(col. 6, lines 5-10) to form compressed data image. In other words, Nonoshita does not disclose

a previously stored transmit reference and encoded real-time information referring to different

images ... The Applicant's invention of claim 18, however, is distinguishable from Nonoshita in

that the compression circuitry of claim 18 uses two different images to form compressed image

data ...", the Examiner wants to point out that: The Specification is not the measure of invention.

Therefore, limitations contained therein can not be read into the claims for the purpose of

avoiding the prior art. In re Sporck, 55 CCPA 743, 386 F.2d 924, 155 USPQ 687 (1968).

Further, it is still submitted that since Nonoshita teaches the encoding of the differences between

the compressed image data B1 to B4 and the original image data A1 to A16 in the JBIG

compression/expanding system (see Figure 21 and column 1, lines 26-33), the compressed image

data B1 to B4 of Nonoshita are considered the same as the encoded real-time information as

claimed and the original data A1 to A16 of Nonoshita are considered the same as the previously

stored transmit reference information as claimed.

Regarding the applicant's arguments at pages 10-11 of the amendment filed January 8,

2001 concerning in general that "... Nonoshita, at the least, does not disclose: a plurality of output

buffers coupled to the compression circuitry for storing the compressed data, as required by claim

18 ... The Applicant respectfully points out that reference numeral 52 of Fig. 1 is a single buffer

for holding uncompressed data ...Furthermore, while reference numerals 70-73 are multiple

buffers, they do not stored the compressed data, i.e., the antecedent basis for the compressed data

being that it is based upon a previously stored transmit reference and the encoded real-time

information. In Nonoshita, the plurality of buffers are used to compress data in stages as describe

above ...", the Examiner respectfully disagrees. Buffer 52 has the capability of transmitting or

receiving data to/from either one of buffers 70 to 73 of the JBIG circuit 20, and wherein buffers

71 to 73 holds compressed and encoded data (see column 5, line 20 to column 6, line 24). As

such, depending on the data acquired buffer 52 may hold compressed data. In addition, since

JBIG circuit 20 receives the image data at position of the reference pixel which is used for

compression and the compressed image data at the position of the reference pixel, and thus

forming compressed image data at the target position (see column 4, lines 44-49 and Figures 3, 4,

21), buffers 71 to 73 within circuit 20 thus receives the same compressed data based upon a

previously stored transmit reference and the encoded real-time information, as claimed. For

reasons above, it is further submitted that the claimed limitations are rendered anticipated by

Nonoshita.

Regarding the applicant's arguments at pages 11-12 of the amendment filed January 8,

2001 concerning in general that "... Nonoshita, at the least, does not disclose: a network interface

coupled to the plurality of output buffers ... the Applicant respectfully points out that reference

number 7 of Fig. 2 does not transmit compressed data from one of a plurality of output buffers, as

required by the Applicant's invention of claim 18. In Nonoshita, the LAN interface 7 merely

"executes data transfer between the LAN I/F 7 and another image processing apparatus connected

to a LAN 6" ...", the Examiner respectfully disagrees. Since LAN interface 7 of Figure 2 and the

plurality of output selection buffers (i.e., 72, 73 of Figure 4, and 27, 28 of Figure 1) is connected

via bus 19 of Figure 2, it is submitted that Nonoshita shows the same network interface coupled

to the plurality of output buffers, the network interface transmitting compressed data from a

selected output buffer of the plurality of output buffers, the compressed data from the selected

output buffer when used in conjunction with the previously stored transmit reference

approximating a next frame expected by a receiving apparatus (see columns 1, 3-6), as claimed. It

if further noted that buffer 73 provides the data for further storage in the memory buffers as

shown in Figure 16, and it is certainly inherent that data within the memory buffers as shown in

Figure 16 may be provided for transmission via the LAN I/F 7 as well (see column 7, line 65 to

column 8, line 5).

Regarding the applicant's arguments at pages 12-14 of the amendment filed January 8,

2001 concerning the section 103 rejection of the claims in view of Nonoshita et al in view of

Barberis et al, it is still submitted that it would have been obvious to provide the particular

selection of an output buffer based on characteristics of a network to provide a selected output

buffer which accommodates one or more characteristics including transmission delays of the

network better than at least one other or all other buffers to be transmitted onto a data

communications channel of a network as taught by Barberis et al for the network interface and

buffer control as shown in Figures 1 and 2 of Nonoshita et al. Regarding the applicant's

arguments pertaining to claim 18, these arguments have been addressed in the above.

Regarding the applicant's arguments at pages 14-16 of the amendment filed January 8,

2001 concerning in general that "... When the encoded data is stored, it is stored in one buffer

(i.e., the D buffer 73 of the JBIG circuit, column 6, line 15 ... , not in a plurality of buffers, as

required by the Applicant's invention of claim 19 ... ", the Examiners wants to point out again that

since buffer 73 provides the data for further storage in the memory buffers as shown in Figure 16,

it is certainly inherent that data within the memory buffers as shown in Figure 16 may be provided

for transmission via the LAN I/F 7 as well (see column 7, line 65 to column 8, line 5).

Regarding the applicant's arguments at pages 16-18 of the amendment filed January 8,

2001 concerning the rejection of claims 9, 10, 12, 13, 16, and 17, it is still submitted that the

combination section 103 rejections on the claims are deemed appropriate for reasons above.

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date

of this final action.

10.   **Any response to this final action should be mailed to:**

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED

PROCEDURE")

Or:

(703) 308-6306 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington. VA., Sixth Floor (Receptionist).

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

3/19/01